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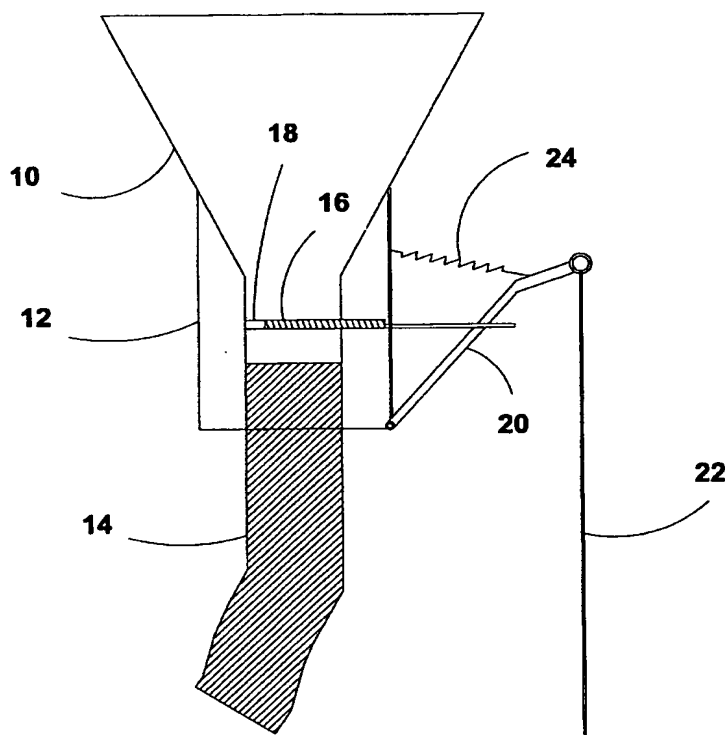
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(54) Title: SYSTEM FOR CONTROLLED RELEASE OF CEMENT MIXTURE FROM A SUSPENDED BUCKET



(57) Abstract: A suspended concrete bucket for dispensing concrete in building sites. A shutter is disposed at the at the cement releasing aperture of the bucket. The shutter is horizontally slidable, controlled by a handle. Opening of the aperture is controlled by an operator sliding the shutter on wheels. The released cement flows through the opened aperture into a hose, for pouring into forms.

WO 2004/063112 A2



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**SYSTEM FOR CONTROLLED RELEASE OF CEMENT MIXTURE FROM A  
SUSPENDED BUCKET**

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**TECHNICAL FIELD OF THE INVENTION**

The present invention relates to handling and utilization of cement buckets suspended from cranes.

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**BACKGROUND OF THE INVENTION**

Concrete buckets suspended from cranes are used to distribute flowable concrete into pre – formed forms of a building project. Several operators are needed to direct the bucket to a convenient position above the form, to release the concrete from the bucket and to distribute discharged concrete. Pouring concrete efficiently and safely from suspended concrete buckets is a crucial task in a building project.

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## BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic description of the bucket of the invention with the shutter partially closed;

5 Fig. 2 is a schematic description of the bucket of the invention with the shutter closed;

Fig. 3 is a schematic description of the shutter and suspending wheels;

10 Fig. 4 is a schematic description of the shutter and suspending wheels in an opened condition.

## DETAILED DESCRIPTION OF THE PRESENT INVENTION

In accordance with the present invention, cement is released  
15 gravitationally from a suspended cement bucket by the opening of a shutter at the bottom of the bucket. Opening of the bucket outlet aperture is performed by an operator pulling a rope, the length of which is not limited. To explain the mechanism of the release of cement, reference is made now to **Fig. 1**. To bucket **10** is appended a construction frame **12**. A hose **14** at the bottom of the  
20 bucket **10** receives the concrete when shutter **16** is opened. In the figure the aperture **18** is partially opened. Handle **20** is pulled by an operator (not shown)

through manipulation of the rope **22**. Spring **24** biases the handle **20** and the shutter **16** towards the bucket **10**. A second operator manipulates the flexible hose **14**, when the shutter is opened, for distributing the flowing concrete. This can however be done by the same operator opening the shutter. In **Fig. 2** the handle **20** has been released by the operator, by loosening the rope **22**. The spring **24** has contracted, shutting off the shutter **16**. Concrete can no longer flow out of the bucket **10**.

The main structural features of a shutter of the invention are shown in **Fig. 3**. Shutter **40** is slidable by wheels **42** attached at its both flanks (only the wheels at one flank are shown). The wheels roll on rails **44**. In **Fig. 4** the shutter is shown opened, revealing hose flange **50** of the hose described above. At this state, concrete pouring down from the concrete bucket in the direction of arrow **52** can flow downwards through the hose. The shutter **40** closes by pushing in the direction of arrow **54**.

**CLAIMS**

1. A suspended concrete bucket comprising a bottom shutter for  
5 releasing flowable concrete gravitationally, and wherein said shutter  
is slid by an operator.
2. A suspended concrete bucket comprising a bottom shutter for  
releasing flowable as in claim 1 and wherein said operator uses a  
10 handle to slide said shutter, and wherein said shutter is biased  
towards a closed position by a spring.
3. A suspended concrete bucket comprising a bottom shutter for  
releasing flowable as in claim 1 and wherein said shutter slides on  
15 wheels.

1/3

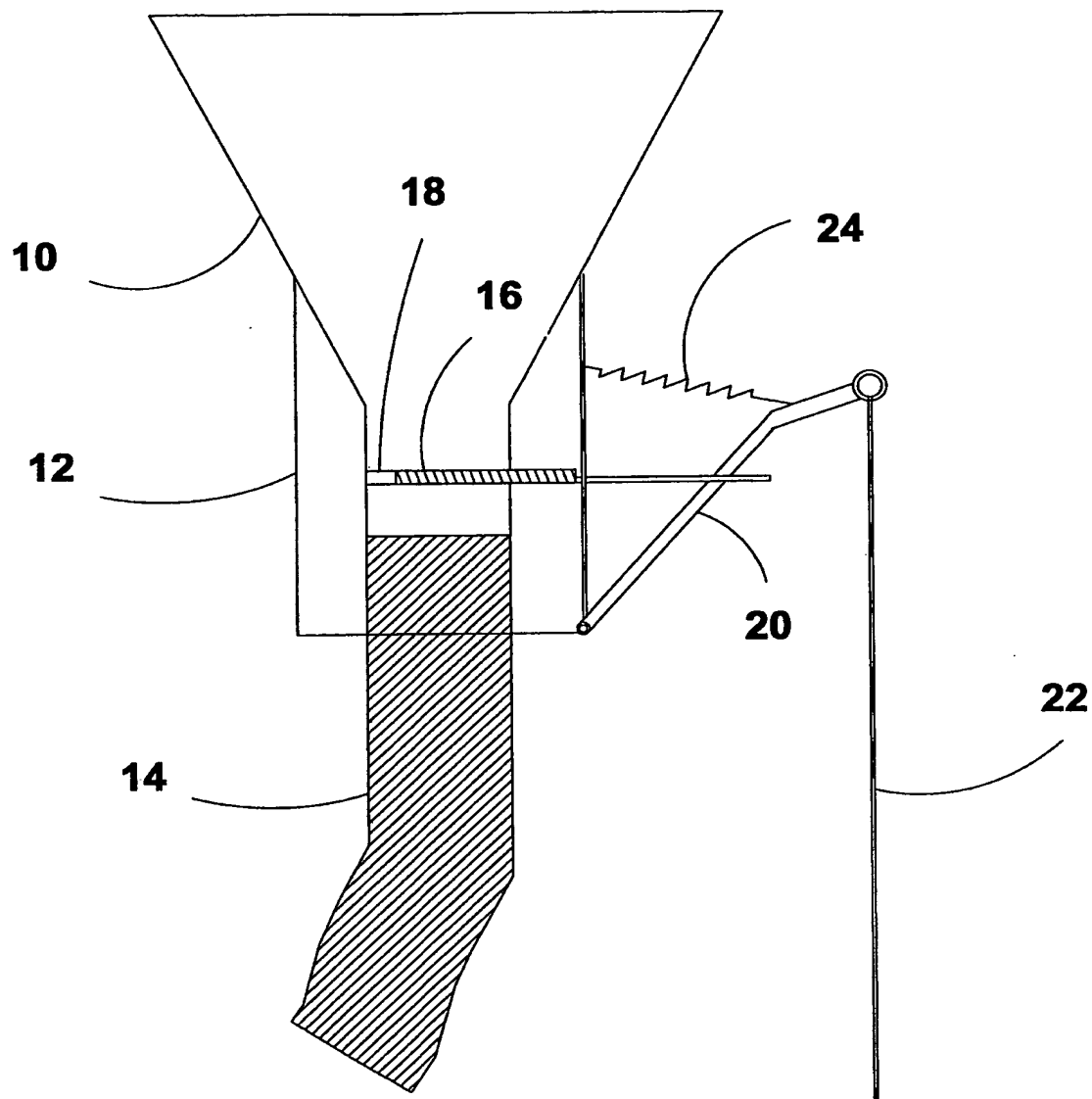


Fig. 1

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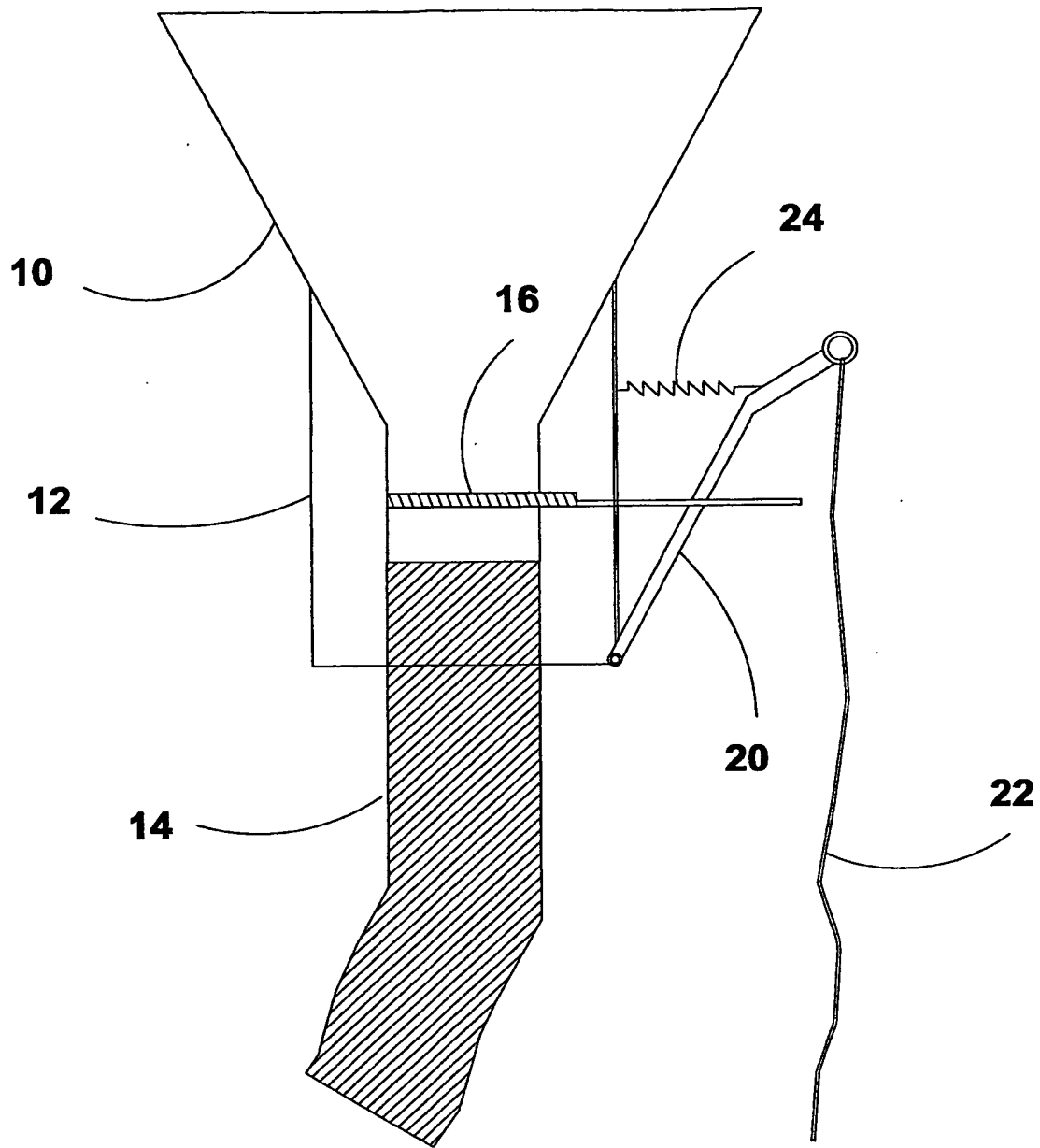
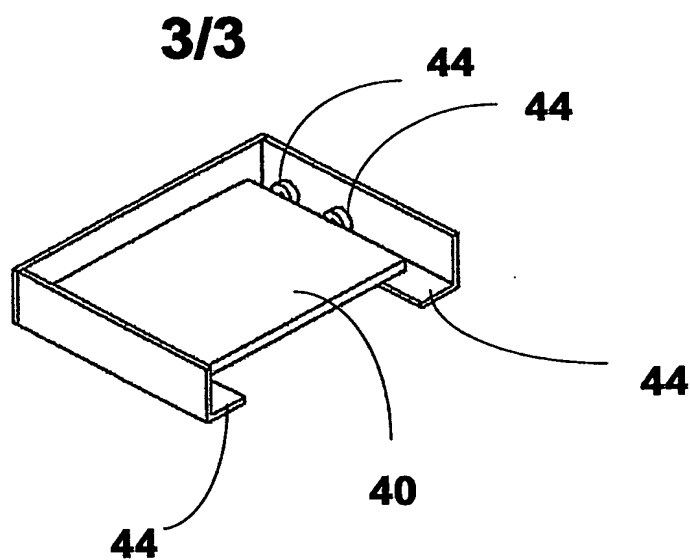
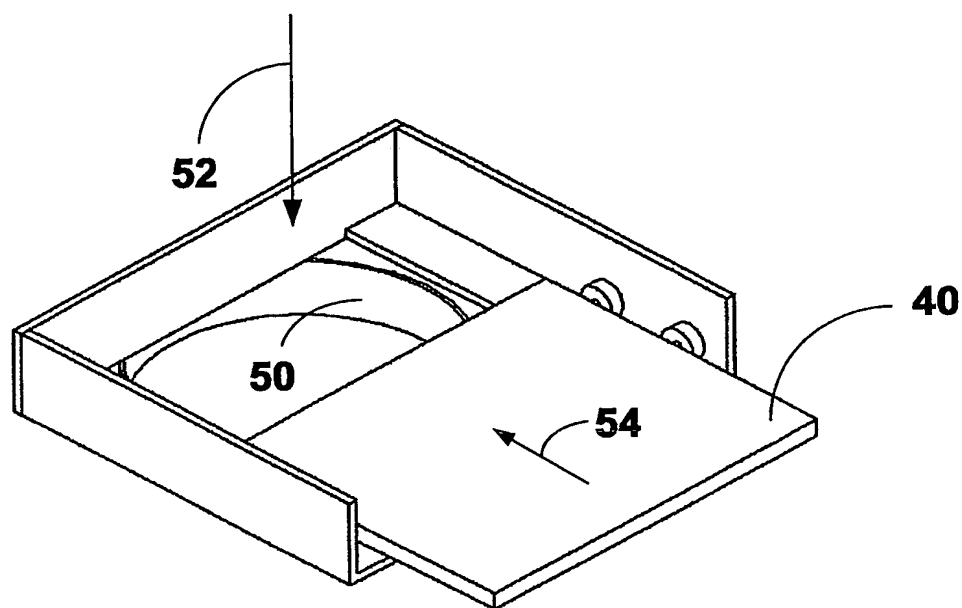


Fig. 2





**Fig. 3**



**Fig. 4**